## NON-THERMAL PLASMA REACTOR GAS TREATMENT SYSTEM

## ABSTRACT OF THE INVENTION

[0071] A gas treatment system and method for using the same is disclosed. The gas treatment system, comprises: a non-thermal plasma reactor; and a catalyst composition disposed within said non-thermal plasma reactor, said catalyst composition comprising a MZr<sub>4</sub>(PO<sub>4</sub>)<sub>6</sub>, wherein M is a metal selected from the group consisting of platinum, palladium, ruthenium, silver, rhodium, osmium, iridium, and combinations comprising at least one of said foregoing metals. The process comprises exposing said gas to a plasma field and to the catalyst composition.